June 21st, 1904. C1.

Sir;-

The accompanying map and memorandum has been prepared on a basis conservative enough to prevent any probability of the wheat production estimate not being realized.

The wheat basis of Manitoba has been taken viz, and average annual production of 18.5 bushels per acre which is the result of the twelve successive harvests 1891 to 1902 inclusive.

The results are considerably below many, but in making estimates of the grain production capacity of any area the fact is frequently overlooked that to carry on grain production successfully only a reasonable percentage of the whole is any one year can be devoted to it. It is thought a most liberal provision for this condition has been made in the enclosed memorandum.

Yours truly,

Professor Mavor,

c/o H. B. Smith, Esq., C. B.

Deputy Controller Gen.

Board of Trade, London, Eng.

[UAA-1974-169-572-002]

Memorandum as to the grain growing resources of Manitoba, Assinaboia, Saskatchewan and Alberta.

Outside of Assinaboia it will be noticed that there is a very considerable area not classified, either uncolored or colored in blue. It is not assumed that the whole of that is worthless from a food production standpoint. While there is very considerable portion such, Owing to mountains, rock, water areas and undrainable marshes or muskegs, also many which if drained and cleared up would prove of little or no value, Still there is a considerable percentage which can be of much value in supporting a population but for the main purpose of this memorandum it has not been considered.

It is not contended that the different colored belts define with anything approaching accuracy the correct subdivision of the country into the different classes but for the purpose desired it is hoped sufficiently so.

The division of the belts into their various percentages is of course merely a matter of judgement but is at least believed that the results as worked out are well within the mark and will give the information it was understood was desired.

[UAA-1974-169.572-0027]

The uncolored area is the best adapted as a grain territory. Contains 36,000,000 acres. Of that fifty percent will average "A 1" soil, moisture and climatic conditions being such that in any cycle of 10 years the average would be high. 20% of the whole will average good. Balance 30 is precarious or too tough, stony, gravely to be economically cultivated or is occupied with water areas, so that one might safely assume 70% of whole suitable for grain, balance fairly good for pasturage and growth of belts of timber etc. + some water areas.

Taking it as a whole probably 65 of the 70% or say 45% of entire area will prove also as fairly well adapted for mixed farming.

In the best large grain growing areas probably not more than one third or 35% could be depended upon to be in crop in any one year. In the district under discussion, when well settled, it would be reasonable to assume that 30% of the 70% or say 21% of whole could be annually cropped, this would give an area of 7,500,000 acres. Take 6,000,000 as devoted to wheat and applying the average wheat crop, that of Manitoba 1891 to 1902 12 years viz 18.5 bush per acre, then the probable annual production would be 111,000,000 bush. Take 2/3 of that as export gives 74,000,000 bushels for that purpose.

[UAA-1974-169-572-002]

The portion colored pink contains an area of 47,000,000 acres. Is particularly well adapted to mixed farming. Of that 35% is naturally 1st zClass. 10% additional will directly or indirectly by reason of irrigation be rendered "A 1". 15% is fair. Balance 40% varies from fair to poor. Very little if any wholly valueless.

This area in Saskatchewan and Northern Alberta is covered with bush and timber to the extent of probably 20% or 10% of the whole area. In the whole there is probably water areas to the extent of 3%. The greater portion of said areas are also in the timered portion.

Of the 45% that is classified as good probably 70% will prove good for wheat and of the 15% classified as fair 30% will also. That makes 36% of the whole or 17,000,000 acres wheat producing. As this is a mixed farming area a larger percentage of what is suitable could be maintained annually in grain than in a straight grain producing area it would be safe to assume that 50% of it could be utilized for wheat or say 8,500,000 acres, placing 70% of that in wheat or say 6,000,000 acres at the average annual production in Manitoba or 18.5. bus. per acre gives an output annually of 111,000,000 bushels.

Allowing two thirds for export equals 74,000,000 bushels.

[UAA-1974-169-572-002]

The portion colored yellow is practically a straight pasturage area, contains 28,000,000 acres of that in areas of quarter or lesser extent about 15% or 4,000,000 acres will be valuable for mixed farming. Of the said 4,000,000 probably 1,000,000 could annually be devoted to wheat. Placing the product at 18.5 per acres equals an annual production of 18,500,000 bushels, 2/3 being available for export gives 12,000,000 bushels for that purpose.

[UAA-1974-169-572-002]

The portion colored green contains an area of 42,000,000 acres on which there is more or less timber, scrub, water areas and very rough broken ~~tur~~itory so probably not more than 50% will be available for pasturage or cultivation. An area equal to 21,000,000 acres. In the latter mixed farming could be carried on to the extent of probably 15% thereof or say 3,000,000 and about 750,000 will be available annually for wheat production, placing the production at 18.5 bushels per acre equals 13,875,000 bushels and taking 2/3 for export gives 9,250,000 bushels available for that purpose.

Recapitulation.

Uncolored.	Annual amount available for export				74,000,000.
Red.	"	"	"	"	74,000,000.
Yellow	"	"	"	"	12,000,000.
Green	"	"	"	"	9,000,000.
				TOTAL	169,250,000.

That would be divided up about as follows;-

	% Manitoba	% Assiniboia,	Saskatchewan,	Alberta.
~~45%~~				
Uncolored.	33,300,000. ~~57~~	27,380,000. ~~1~~	12,580,000. ~~1~~	740,000.
Red. ~~2~~	1,460,000. ~~20~~	14,800,000. ~~20~~	20,720,000. ~~50~~	37000,000.
Yellow. ~~0~~	0,000,000. ~~95~~	11,400,000 ~~0~~	0,000,000. ~~5~~	600,000.
Green. ~~15~~	1,017,500. ~~4~~	370,000. ~~30~~	3,515,000. ~~47~~	4348,500.
TOTAL.	55,797,500.	53,950,000.	36,815,000.	42,687,500.
Percentages of whole.	21.15%	31.88%	21.75%	25.22%

[UAA-19 h-169-677-1051]

The Secretary of the Board of Trade at Calgary, Mr. C. W. Peterson furnished the following as the wheat crop statistics of Manitoba for the years 1891 to 1902 inclusive. 1891 - 25.3 bus. per acre; 1892 - 16.6; 1893 - 15.56; 1894 - 17; 1895 - 27.36; 1896 - 13.33; 1897 - 15.14 1898 - 17.01; 18.99 - 17.13; 1900 - 8.90; 1901 - 25.10; 1902 - 26; which is an average for the twelve years of 18.57 bushels per acre, call it 18.5

[UAA 1974-169-572]

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Outside of Assiniboia it will be noticed that there is a very considerable area not classified, either uncolored or colored in blue. It is not assumed that the whole of that is worthless from a food production standpoint, while there is very considerable portion such, owing to mountains, rock, water areas and undrainable marshes or muskegs, also many which if drained and cleared up would prove of little or no value, still there is a considerable percentage which can be of such value in supporting a population but for the main purpose of this memorandum it has not been considered.

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[UAA 1974

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The portion colored pink contains an area of 47,000,000 acres Is particularly well adapted to mixed farming. Of that 35% is naturally first class. 10% additionnal will directly or indirectly be reason of irrigation be rendered "A 1". 15% is fair. Balance 40% varies from fair to poor. Very little if any wholly valueless.

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CUAN-1974-169-572-0023

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per

[UAA-1974-169-572-002]

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Recapitulation.

			Bushels.
Uncolored.	Annual amount available for export		78,000,000
Red.	" " " " "		74,000,000
Yellow	" " " " "		13,000,000
Green	" " " " "		9,000,000
		TOTAL	169,250,000.

That would be divided up as follows;-

	Manitoba.	Assiniboia	Saskatchewan	Alberta.
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TOTAL	35,797,500	55,950,000	36,815,000	42,687,500.
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